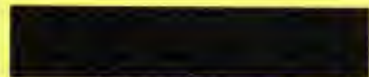
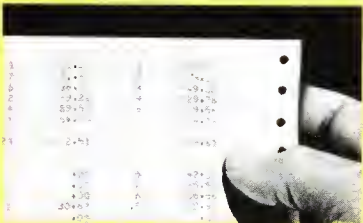
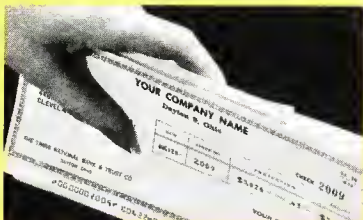
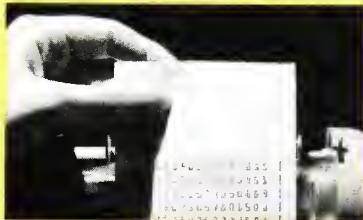
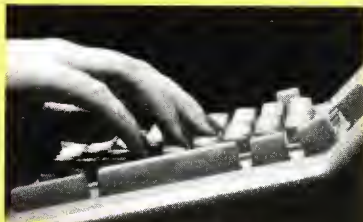


NCR



EQUIPMENT FOR **THE TOTAL SYSTEM**



In the selection of a data processing system...

serious consideration should be given to the overall system from the creation of an original entry to the final reports produced. Although management emphasis is placed upon complete reporting and automation of procedures, final reports can only reflect the accuracy of the original entries upon which they are based. What are these original entries? They are the thousands of individual daily transactions that become a part of a company's financial records. Therefore, the method of entering an original entry into a system should be carefully evaluated.

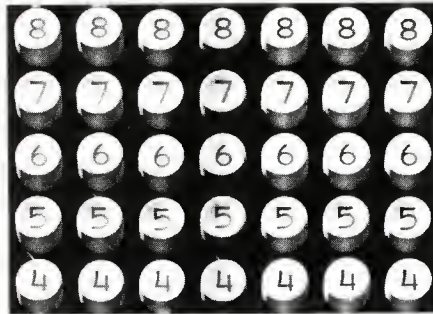
New demands have been made on the office equipment industry by the trend toward centralized processing of departmental data. Each machine, today, must be like a musical instrument, an individual unit, yet contributing to an overall musical theme. Each machine must perform basic accounting functions, yet automatically provide media for overall inter-departmental analysis by a computer.

Each NCR machine, described in this booklet, provides purity of input media at the de-centralized departmental level through a series of proof operations and mechanical auditing totals. This purity of input media guarantees the accuracy of data for final management reports.

Electronic data processing, within the framework of NCR philosophy, is viewed from the creation of an original entry to the final reports. For that reason, control is established at the point where data enters the system which in turn provides absolute control at the central processing level. The application of this philosophy in the design of NCR equipment clearly illustrates why it complies with every requirement of the *total system's concept, from the original entries to the final reports.*

NCR TOTAL SYSTEMS

FROM ORIGINAL ENTRIES TO FINAL REPORTS



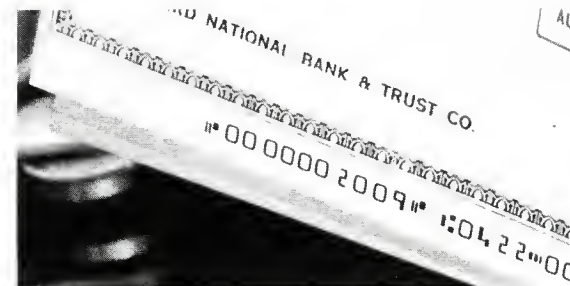
ACCOUNTING MACHINES
ADDING MACHINES
CASH REGISTERS



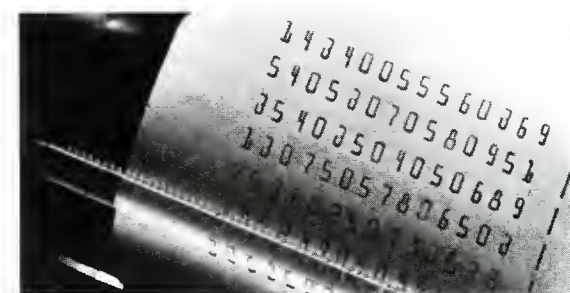
PUNCHED PAPER TAPE



PUNCHED CARDS

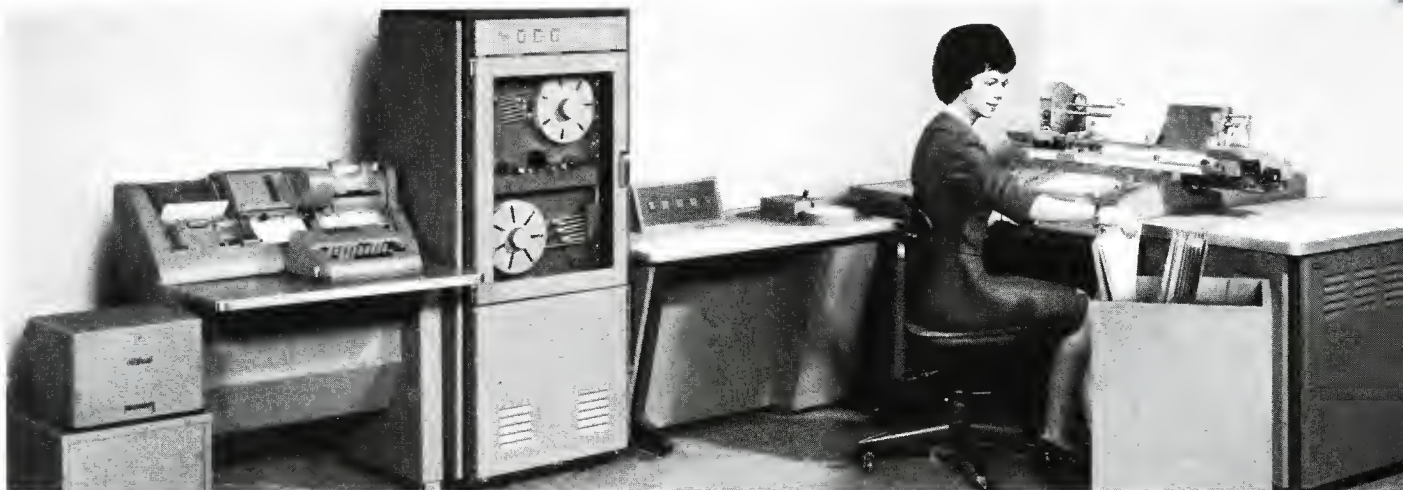


MAGNETICALLY ENCODED DOCUMENTS



OPTICAL JOURNAL TAPES

FOUR FORMS OF AUTOMATION MEDIA . . .
FOUR SYSTEMS OF PROCESSING



NCR 390 COMPUTER (above)

NCR 310 COMPUTER (below)



NCR 315 COMPUTER (above)

NCR DATA PROCESSING CENTERS (below)



NCR Machines for All Degrees of Automation

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COMPU-TRONIC, SALES-TRONIC and POST-TRONIC are registered trademarks of The National Cash Register Company.

Section 1

NCR
ORIGINAL
ENTRY
MACHINES



The NCR Adding Machine—when applied as a “data recording unit”—speeds the flow of data to all types of processing systems. The many automatic features simplify operator training . . . assure purity of input to the data processing system . . . increase production of punched data . . . bring new savings to data processing procedures. These features include automatic recording of all ciphers . . . automatic selection of required processing symbols . . . automatic item count . . . verification of data recorded through accumulated proof, visible dials, printed journal, and visual keyboard inspection.

The operating efficiency is further enhanced by optional features to match the job requirements, such as, split-keyboard construction, variable recording capacities, and multiple carriage widths.

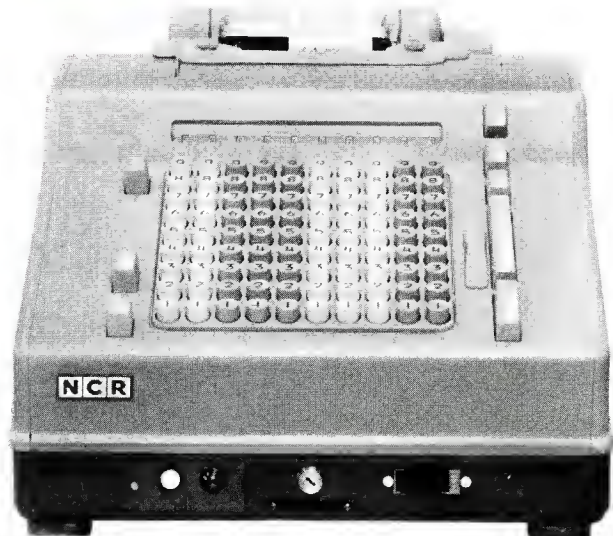
FORMS OF AUTOMATION MEDIA

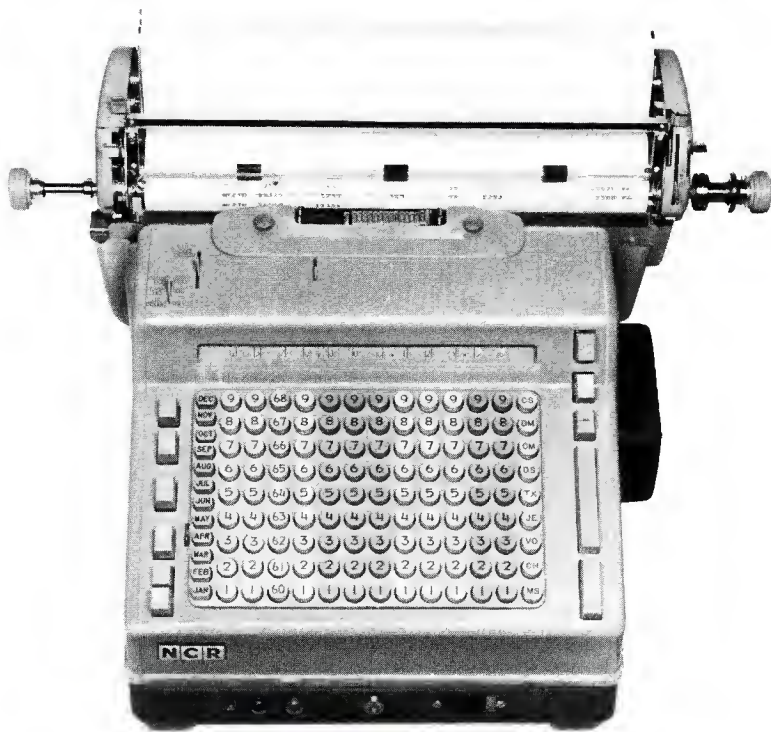
The NCR Adding Machine automatically controls the punching of paper tape and cards . . . creates stylized printing for optical reading . . . controls MICR printing (Magnetic Ink Character Recognition) for automatic re-entry of data through the document sorter-reader.

EDP APPLICATIONS

Typical examples: sales analysis, labor distribution, inventory accounting, expense distribution, transportation costs, job costs, vendor analysis.

NCR Adding Machines





Extremely flexible, this desk model bookkeeping machine combines hard-copy accounting with the automatic creation of punched tape or cards in a simple, fast posting operation. All the automatic controls built in the adding machine are incorporated in the desk-model bookkeeping machine.

Proofs and audit checks are a part of the hard-copy accounting control. Thus, the purity of input generated with the handling of the source document means accurate reports prepared at central processing.

NCR Desk Model Bookkeeping Machines

Automatic tabulation, single key word description, and special punctuation add speed and simplicity to posting operations.

FORMS OF AUTOMATION MEDIA

The NCR Desk Model Bookkeeping Machine automatically controls the punching of paper tape or cards... creates stylized printing for optical reading.

EDP APPLICATIONS

Typical examples: Customer billing, payable distribution, payroll and related distributions, sales analysis, product analysis, customer and territory analysis.

NCR SALES-TRONIC® Registers provide the greatest combination of features ever designed to simplify paperwork. Name the problem—NCR has the features: multiple-totals for instant, flash reports...mechanical posting of customer's ledger, saleschecks, or lay-away sales...automatic change computation to speed service and eliminate mistakes in change...publicity of amount recorded and personalized receipt for the customer's inspection...printed figures of each item and total on saleschecks for proof of accurate recording...individual cash drawers to pinpoint cash shortages...individual counters to measure activity of salespeople...permanent audit trail (in stylized printing) for optical reading.

This blend of features for systems control—plus NCR's ability to create automation media as a by-product of recording the sale—brings retailers the greatest system values ever offered for a true picture of merchandise movement.

FORMS OF AUTOMATION MEDIA

NCR Sales-Tronic Registers automatically control the punching of paper tape and punched cards...creates stylized printing for optical reading.

EDP APPLICATIONS

Typical examples: sales by departments, classifications within departments, price-line reports, unit stock control, transaction control, employees' purchases, exception reporting, automatic customer billing.

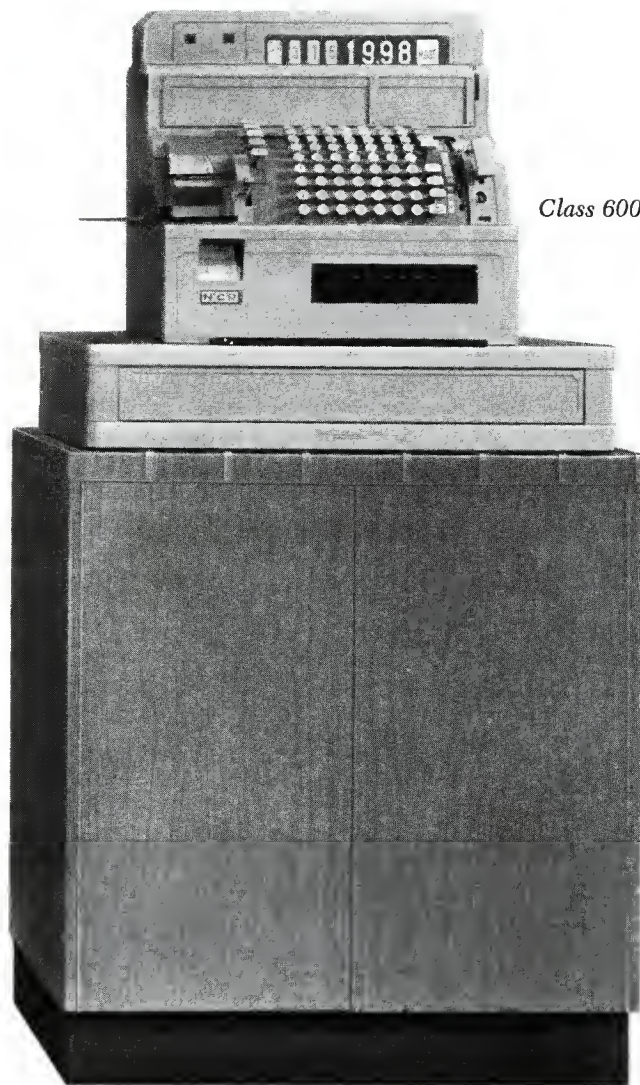
NCR Sales-Tronic Registers

Class 21

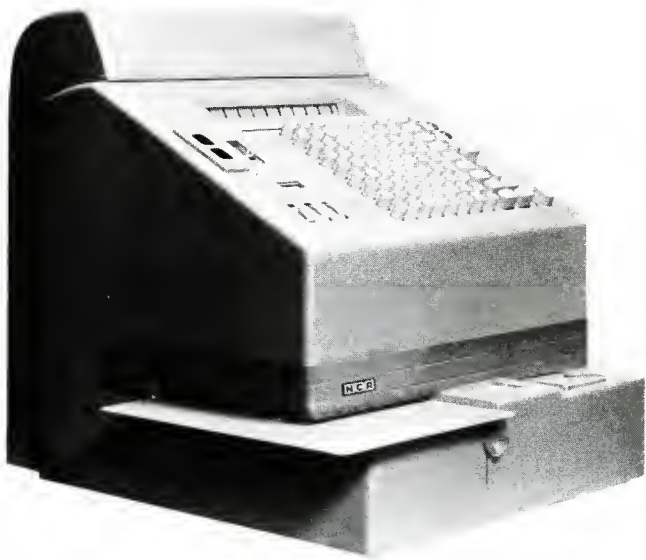




Class 52



Class 6000



NCR

Remittance Control and Distribution Machines

The versatile class 41-W incorporates many advanced features for remittance control and analysis applications: up to 20 mechanical totals for instant flash reports . . . automatic change computation and dispensing . . . permanent audit trail with automatic tracer number . . . machine-validation of source document . . . auxiliary journal tape for batch control — all under lock control and auditor supervision.

In addition, the 41-W creates “audit-proved” processing media as an automatic by-product of controlling the original entry. The ability of this flexible machine to integrate many accounting functions into one operation reduces work duplication . . . eliminates peak work loads . . . cuts paper handling costs . . . speeds the flow of data to central processing for quicker management reports.

FORMS OF AUTOMATION MEDIA

The 41-W controls the creation of punched paper tape or punched cards . . . creates stylized printing for optical reading . . . controls MICR printing (Magnetic Ink Character Recognition) for automatic re-entry of data through the document sorter-reader.

EDP APPLICATIONS

Typical examples: paybill receipting, inventory analysis, all types of sales, expense, and purchase distributions.

Whether the posting is in the presence of the customer—or in the back-office—the NCR 42-W creates hard-copy records with proven automation media.

The 42-W provides up to 20 mechanical totals . . . prints four original records simultaneously: customer's statement, customer's ledger, posting media, and permanent audit trail. And most important, it protects the original entry transaction with lock controlled features under auditor supervision.

NCR brings automation *ANOTHER EXCITING FIRST* — on-line processing from anywhere in the country. The Class 42 can "tell" the NCR 315 computer (at central headquarters) what the original entry consists of . . . in seconds, the computer automatically posts at the branch or department level—all details of the transaction.

FORMS OF AUTOMATION MEDIA

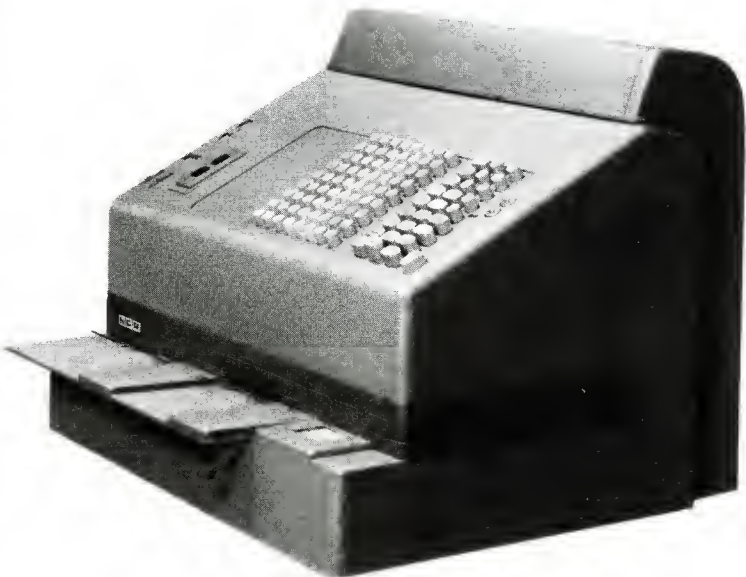
The 42-W controls the creation of punched paper tape and cards . . . creates stylized printing for optical reading . . . provides on-line communication with the NCR 315 computer.

EDP APPLICATIONS

Typical examples: savings, mortgages, accounts receivable, remittance control, sales analysis, disbursements and distribution.

NCR

Window Posting and Back Office Accounting Machines



These NCR accounting machines have been proclaimed by executives, businessmen, accountants and operators throughout the world as the most *versatile* . . . most *automatic* general purpose accounting machines ever designed. Compare these outstanding features: automatic memory unit selection . . . automatic split print and accumulation . . . automatic "decision-making" controls . . . automatic dollar sign printing for protection of amounts . . . complete alpha-numeric facility . . . complete variable program controls . . . enforced distribution . . . complete posting visibility . . . "single-key" reverse entry control . . . automatic clearing of totals . . . variable symbol and date printing. When these features are combined with the creation of proven automation media, "Office Automation" takes on a new meaning of efficiency and economy.

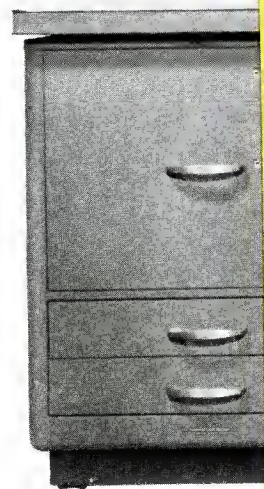
FORMS OF AUTOMATION MEDIA

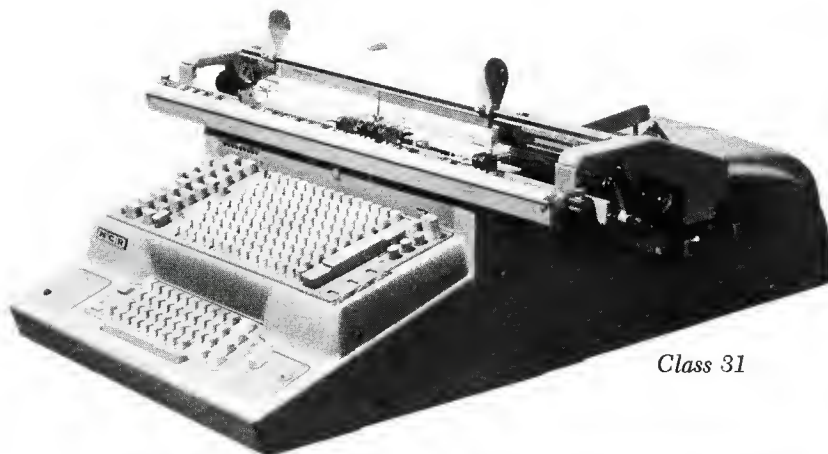
These versatile machines combine essential accounting records with the automatic creation of punched paper tape and cards.

EDP APPLICATIONS

Typical examples: sales analysis, inventory control, expense and purchase distributions, budget and comparative reports, appropriation analysis.

NCR Multiple-Duty Account





Class 31



Class 32



Class 33

ting Machines

NCR



Compu-Tronic Machines



NCR COMPU-TRONIC* combines "split-second" electronic calculations and versatile accounting techniques to meet the demands of varied, complex and specialized accounting requirements. Electronically, the Compu-Tronic machine makes many decisions and executes many commands... "self-checks" every computation... reads punched cards... computes at "split-second" speeds... points-off correct decimal punctuation... rounds-off product to the nearest required digit... retains up to 31 constant factors... retains factors and products for repeated use... performs chain computations.

Through simplicity of operation and reliability of performance, the Compu-Tronic machine sets a new standard of speed, efficiency and economy in paper handling for all types and sizes of business.

FORMS OF AUTOMATION MEDIA

The Compu-Tronic machine reads punched cards as input—creates punched paper tape or punched card output.

EDP APPLICATIONS

Typical examples: wage accrual, daily efficiency reports, payroll writing, production and inventory control, pension fund reporting, government reporting, job cost analysis, interest computation, budget analysis, tax billing, invoicing and billing, sales analysis, order analysis, comparative management reports, burden reports, commission statements, mortgage accounting, escrow analysis.



NCR Account Verifier

The Account Verifier—actually a “miniature computer”—is coupled to the data recording machine and the paper tape recorder or card punch. The verifier automatically audits the accuracy of each account number recorded on the adding machine, accounting machine, or sales-tronic cash register before the information is punched into paper tape or cards. If a transcription, transposition, or any other type of random error occurs, the verifier “tells” the operator, “I will not accept the number. It is incorrect.”

The account verifier can also be coupled with machines which print the journal tape in stylized type for processing through the NCR Optical Reader. If an incorrect number is printed on the journal tape, then the account verifier locks the machine and “tells” the operator: “I have just printed an incorrect number. Please void this transaction and re-enter the correct number.”

The NCR accuracy team of *automatic account verification* and *original entry proof* assures the user that only pure data will enter his processing system.



The Paper Tape Recorder, linked with any of NCR's Data Recording Machines, creates punched paper tape to bring many economies to the processing of business data: elimination of manual key-punching . . . elimination of manual verification . . . reduction of work duplication . . . automatic creation of pure data for immediate entry into the computer . . . faster, more timely management reports.

From every angle, the NCR paper tape recorder offers superior features: flexibility of programming . . . simplicity in program changes . . . reliability of data punched into tape. This reliability includes (1) An "Answer Back Circuit" to assure that an electrical impulse for each character in the transaction has reached the punch magnets.

NCR Paper Tape Recorders

(2) A "Parity Check" Circuit to assure the punch magnets have been energized in a pre-determined odd or even code. (3) A Flashing Light to warn the operator when the tape supply is low. (4) An Interlock Switch to halt the recorder when the tape supply is exhausted.

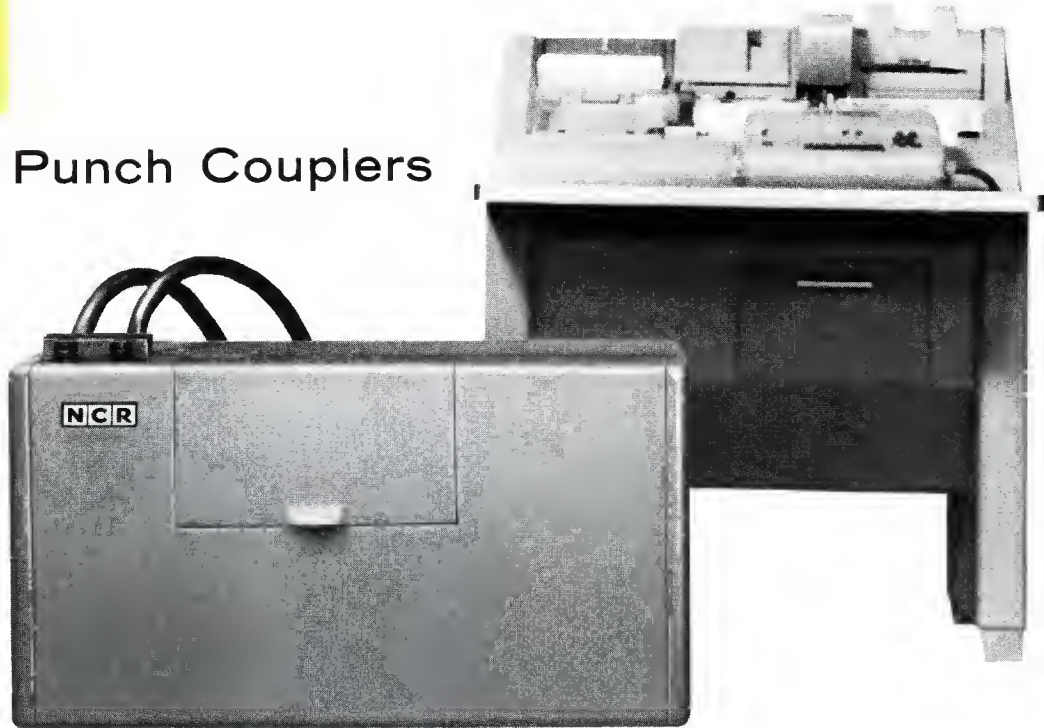
The creation of punched paper tape, as an automatic by-product of an essential accounting function, is truly a low-cost, economical approach to practical automation.

The NCR Card Punch Coupler opens vast, new areas of cost reduction possibilities for all sizes and kinds of businesses.

When hard-copy accounting is combined with key-punching, then punched card preparation becomes a high-speed, automatic, production operation.

NCR

Card Punch Couplers



Key-punch training problems vanish. Automatic controls select and punch desired alpha-numeric data . . . duplicate previously punched data . . . skip through one or more fields . . . space one or more columns without punching . . . identify codes for add, subtract, reverse, and credit balance operations . . . select alternate programs for variable punching.

By coupling the key-punch with the NCR Data Recording Machine, all the advantages and savings of two important office machines are combined in one operation.

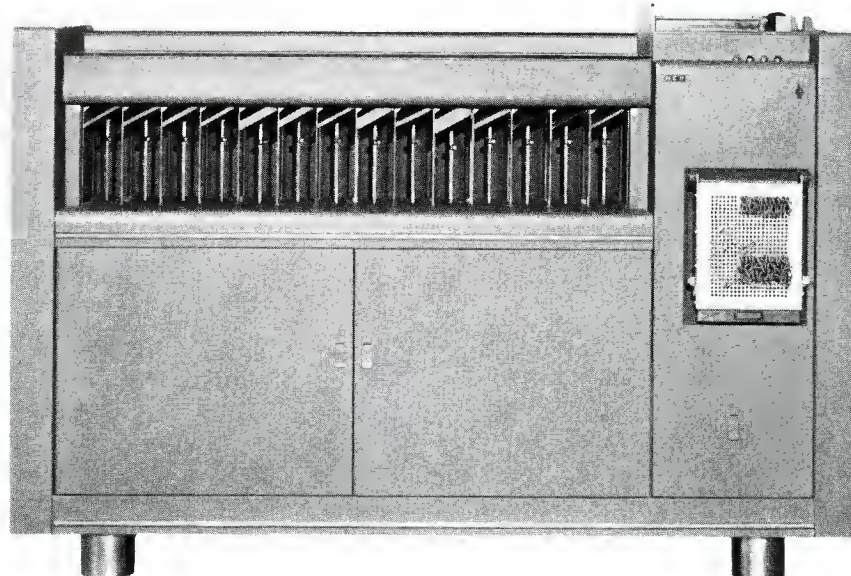
The programmable electronic memory of the NCR 406 Sorter-Comparator assures accurate reliable pocket selection. Data, electronically read from the card is first placed in memory where it is utilized for testing, comparing, and finally pocket determination. Any logical configuration of punches can be directed to open any desired pocket.

Two reading stations, each equipped with an 80 column brush, enable the NCR 406 to verify sorting accuracy, to select specific cards or groups of cards from a deck, to sequence-check a file of cards, to select a predetermined number of cards from a group of cards . . . all without any reduction of its rapid 1,000 card-per-minute sorting speed.

When handling alphabetic sorting routines, half the letters of the alphabet are sorted on the first card pass on the NCR 406 Sorter. The remainder, often less than 45 per cent of the cards, is then sorted without removing any of the cards sorted on the first pass. The fourteen sorting pockets, which improve sorting procedures, also increase the efficiency of handling other sorting problems; for example, card selection can be accomplished during any conventional sorting run.

NCR

Sorter-Comparator



NCR Data Collection System

The NCR TRANSACTER* System—specifically designed for source collection of data—serves all levels of management who are interested in manufacturing costs, production scheduling, status of priority jobs, work-in-process, parts shortages, inventories . . . in fact, any record-keeping problem pertaining to manufacturing efficiency.

Briefly, the NCR Transacter System consists of two basic units. The first is the NCR 473 Data Input Station, which reads both fixed and variable production messages into the system. The second is the NCR 463 Central Compiler, which transcribes the production messages, from remote locations, into punched paper tape for processing. Thus, the Transacter System speeds reporting by eliminating the time delays of paper and pencil entries.

NCR 473 DATA INPUT STATION

In one operation, the input unit reads and transmits three different types of pre-punched information:

(1) up to 15 card columns of fixed information about the employee, such as his identification number, home department, and working shift.

(2) up to 80 card columns of fixed information about the order, such as production part number, scheduled quantity, operation number, and standard for the operation.

(3) up to 22 card columns of pre-punched variable data, such as exception instructions, special parts, and next department.

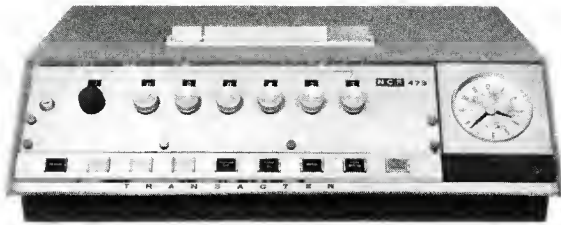
In addition to the pre-punched card information, the NCR Input Station will transmit on-the-spot variable information relating to the manufacturing process such as pieces, units, assemblies, hours and scrap. Numeric or coded information—from 0 to 999,999—can be entered into the system by the operator through the setting of six visual dials on the input station.

NCR 463 CENTRAL COMPILER

All input data is transmitted by cable flow to the central compiler. Here the employee number, production data, and variable messages are transcribed into punched paper tape at 60 digits per second. While verifying the message, the compiler adds date, time, end of message, and any other codes required by the processing equipment.

The output tape from the compiler can be read directly into the NCR 390, 310, 315, or

*TRANSACTER is a registered trademark of the General Time Corporation.



Class 473

304 computers. The tape can also be fed directly into communication systems or converted to cards.

This system is truly unlimited in expansibility. Depending on the activity, up to thirty-six or more Input Stations can be connected to one Compiler... two compilers can be interconnected... additional input stations can be added whenever required.

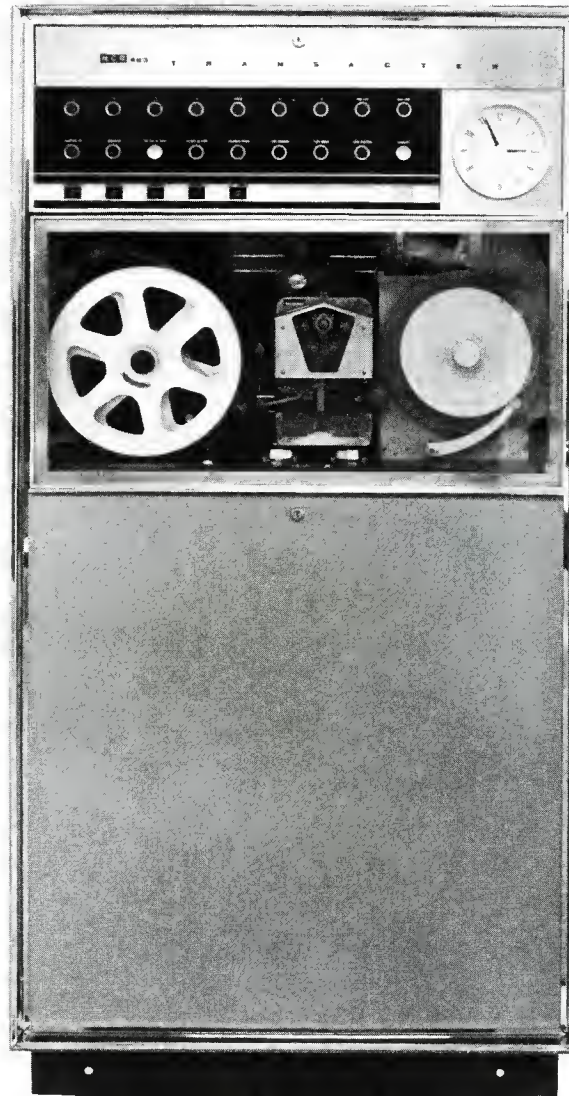
EDP APPLICATIONS

Production control—scheduling, order location and status, machine loading and unloading, past due orders, lead time analysis reporting, job progress.

Labor Reporting—employee time, operation time, incentive payroll data, reports of lost or unproductive labor and reasons for loss of production, controlling engineering project time, accounting for labor spent on expense and capital improvements.

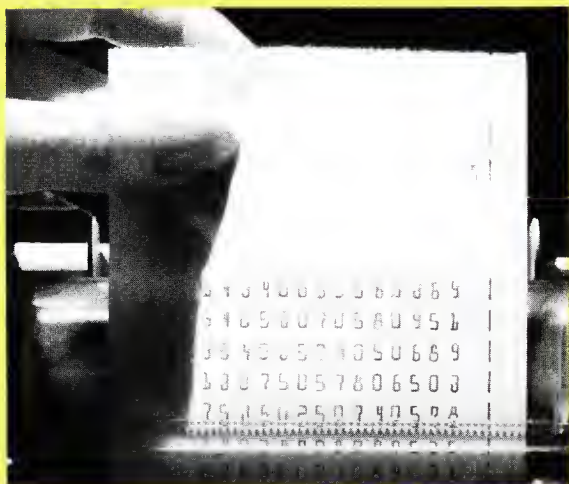
Inventory Control—requisitioning and procurement, receipt and issue of items, adjustments, transfers.

Quality Control—incoming goods and in-process inspection reporting, lot sampling, rework control, scrap reporting.



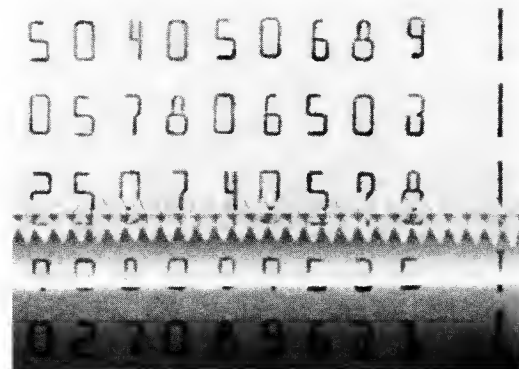
Class 463

Section 2



NCR

OPTICAL
READING
OF JOURNAL
TAPES



The special stylized printing shown above is the NCR Optical Type Font. This font was developed as a medium that could be read by both people and machines — a major advance in simplifying the creation of input for data processing systems.

NCR Optical Type Font

The principle of Optical Reading is extremely simple. As the salesperson or machine operator records the original entry on an adding machine, accounting machine, or cash register, the information is printed on the journal tape in the stylized font that can be read by the NCR Optical Reader.

The Optical Reader can operate on-line with the computer for immediate processing of reports. Or, the reader can operate off-line — converting the journal tape information into punched paper tape.

NCR Optical Reading offers businessmen three outstanding advantages: first, it is a simple and efficient method of creating input for computer processing. Second, there is no need to change the crystal-clear audit trails of your present original entry procedures. And third, the savings in equipment investment can be substantial because in many cases your present NCR machines can be modified to print in the NCR Optical Type Font.



NCR Machines Equipped with Optical Type Fo



Here are some of the NCR business machines equipped with optical type font. The built-in flexibility of each machine assures that whatever your system requirements might be, one of the above machines can be tailor-made to meet your system specifications. With this versatility, you retain all the protection and audit control built into your present system.

Since the optical reading of the journal tape automates business procedures, there's no other equipment investment required to create data for computer processing.

e Font

NCR

111	1	1	1	100	100.00	1	1
111	4	4	7	897	369.65	0	4
111	4	4	6	000	009.38	8	4
111	4	4	6	000	000.38	6	4
111	4	4	6	000	001.99	4	4
111	4	4	6	016	406.99	4	4
111	4	4	6	087	009.06	0	4
111	4	4	5	000	004.07	8	4

The NCR Optical Reader—a major advance in integrating the original entry with central processing—scans the journal tape at 26 lines per second . . . 20 characters per line . . . for a total of 520 characters per second.

The accuracy features and checking circuits built into the photo-electric reader assure all information sent to the processor is identical with the information printed on the journal tape.

If off-line processing is desired, the Optical Reader will transcribe the printed journal tape into punched paper tape through the NCR 371 punch.





NCR 310



NCR 390



NCR 315

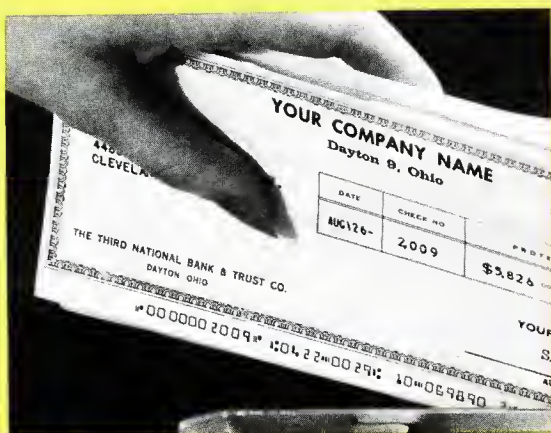


DATA PROCESSING CENTER

On-Line Processing of Optical Journal Tapes

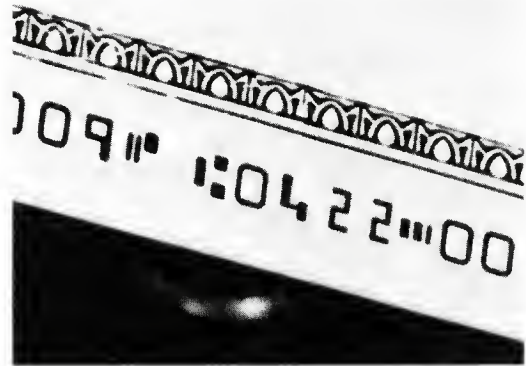
NCR Optical Reader operates on-line with any NCR Computer to simplify paperwork for all lines of business—from the industrialist to the neighborhood store.

Section 3



NCR

**MAGNETIC
CHARACTER
IMPRINTING**



MICR—Magnetic Ink Character Recognition

The initials MICR are an abbreviation for "Magnetic Ink Character Recognition." It was developed as a common machine language for banks—a language with stylized characters and symbols that can be read by the human eye as well as the "magnetic eye" of the sorter-reader.

MICR on checks has enabled banks to process billions of checks in less time with greater accuracy . . . use personnel more effectively . . . reduce work-space requirements.

The use of MICR is expanding into other lines of business as an efficient method of sorting, listing, posting and filing large volumes of media.

MICR APPLICATIONS

Typical examples: bank documents, utility bills, gasoline credit cards, or any volume billing job that requires re-entry of data into the system.

The Magnetic Amount Imprinter is designed to imprint amounts and transaction codes in magnetic ink. Since the amount of a document is not imprinted until it enters the system, the NCR Amount Imprinter is an important unit. It provides the essential MICR imprinting which is necessary for the automatic input of data into the system.

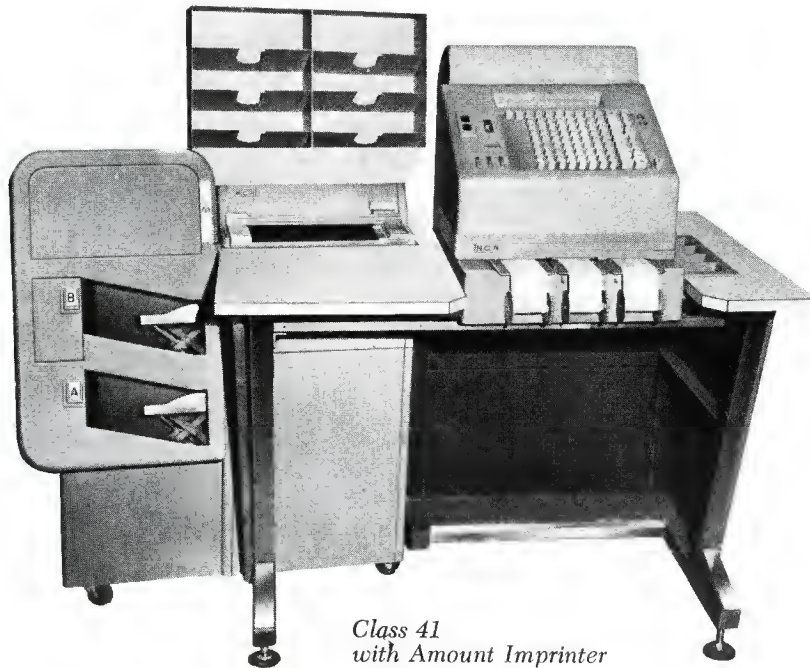
The Amount Imprinter can be attached to the NCR Adding Machine, Class 41, and Class 2000. All three machines imprint amounts and code numbers in magnetic ink as a by-product of the proving procedure.



*Adding Machine
with Amount Imprinter*

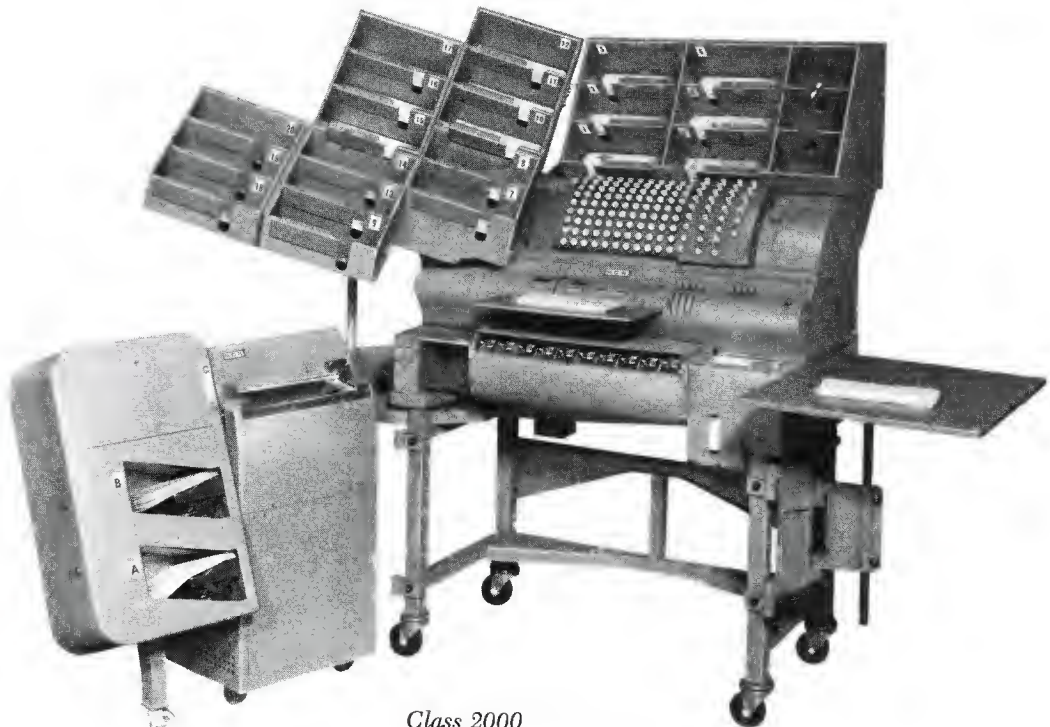
A program selector on the amount printer enables documents to be sorted into two different classes. In banks, "On Us" checks can be sorted in one receptacle, with "Deposits" in the other. Or, the amount printer selector can be programmed for all "Clearing" items to sort in one receptacle, with "Transit" items in the other.

MICR printing by NCR machines simplifies document handling when volume jobs require automatic processing.



*Class 41
with Amount Imprinter*

NCR Magnetic Amount Imprinter



*Class 2000
with Amount Imprinter*





NCR Proof Machine

The amount imprinter is an integral part of the NCR 450—the most complete and economical machine ever designed for the proof department of a bank. It processes more checks in less time and with less effort than any other proof machine available today. This economy is achieved through its exclusive combination of features: selective programming to control sorting and printing . . . automatic totaling—up to 40 distribution totals . . . automatic 3-way float and service charge analysis with deposit slip validation . . . programmable 3-way batch control . . . independent add-subtract “list” total . . . automatic media sorting . . . direct, simplified error correction . . . MICR amount and transaction code imprinting . . . automatic endorsing . . . automatic itemized listing with bank identification for all distributions . . . time-shared media handling . . . greater production . . . more operator conveniences . . . less operator fatigue.

A flexible plugboard programs the features of the NCR 450 for the specific proof application. In fact, this machine can be the standard for a banker to use in measuring the efficiency of his proof operation.



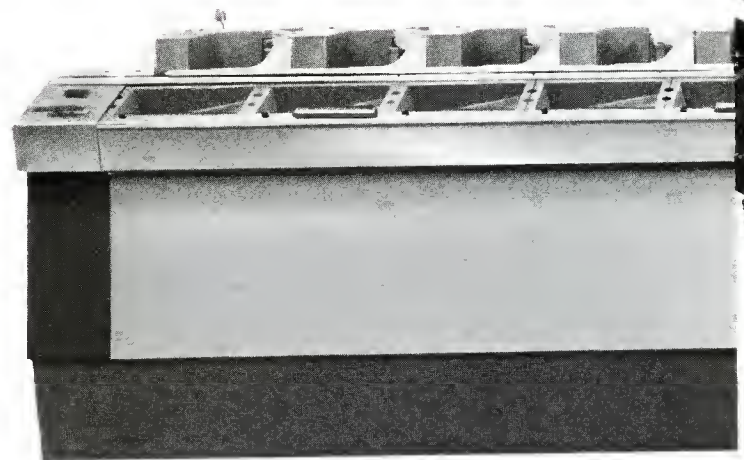
NCR Qualification Printers

The Qualification Printer commands respect in the banking world for its outstanding performance, unmatched quality of printing, and simplicity of operation in imprinting magnetic ink characters.

It is compact in size and can be operated by anyone, anywhere in the bank to imprint magnetic characters on any document which has not been "qualified" for the bank's automation system.

The Qualification Printer will imprint the Federal Reserve Routing Symbol, A.B.A. Transit Number, and Depositor's Account Number on a counter check . . . initial supply of checks to a new depositor . . . and any other media that requires MICR imprinting for document processing.

This economical, on-premise method of magnetic character imprinting is another example of NCR's System Planning in the creation of a new generation of machines for practical automation.



Pitney-Bowes NCR Magnetic Sorter-Reader

The Sorter-Reader was specifically engineered to encompass all the requirements for high-speed document handling of banking media as outlined by the American Bankers Association.

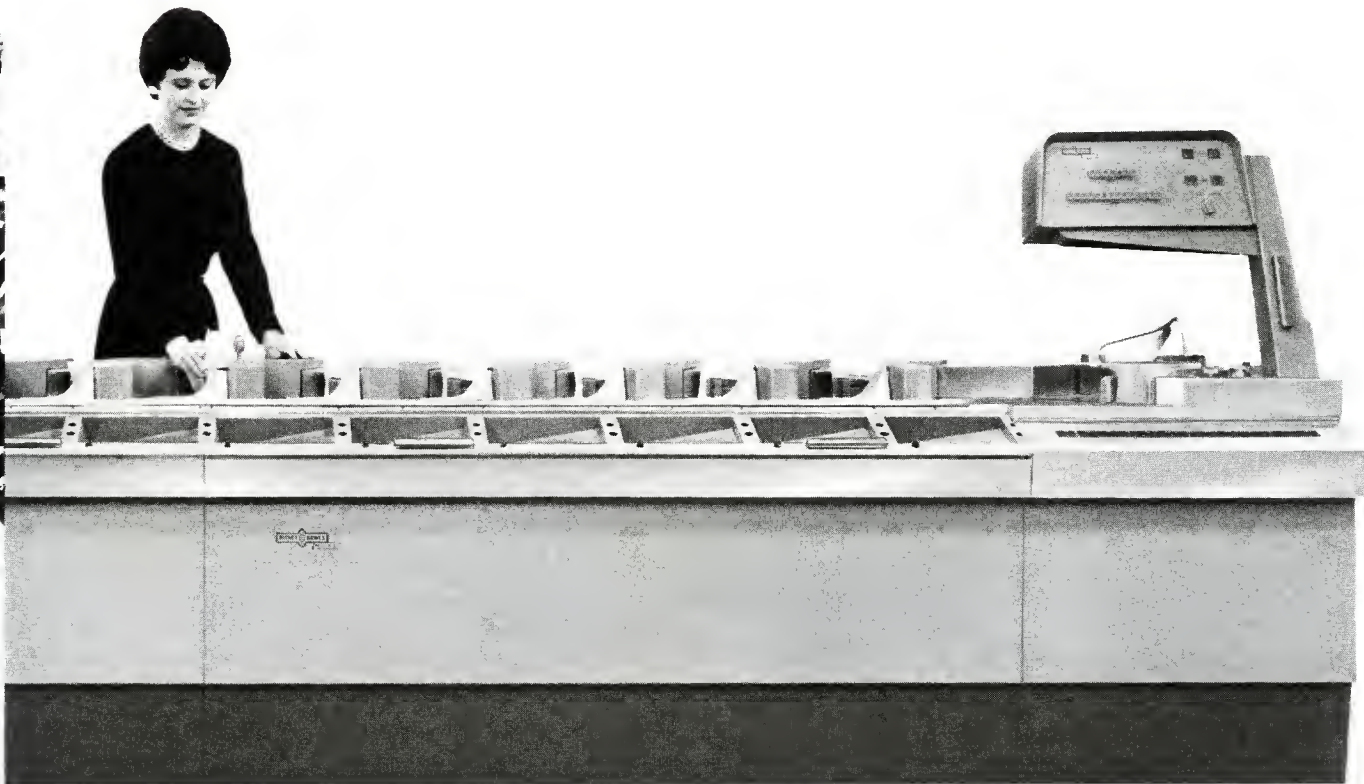
The Sorter-Reader endorses and processes variable size documents within the following dimensions: width — from 2½" to 3¾"; length — from 5¼" to 10"; thickness — from .003" to .007".

Independent Operation — Model 403 reads and sorts digitally at 1620 documents per minute . . . model 402 reads and sorts at 750 per minute.

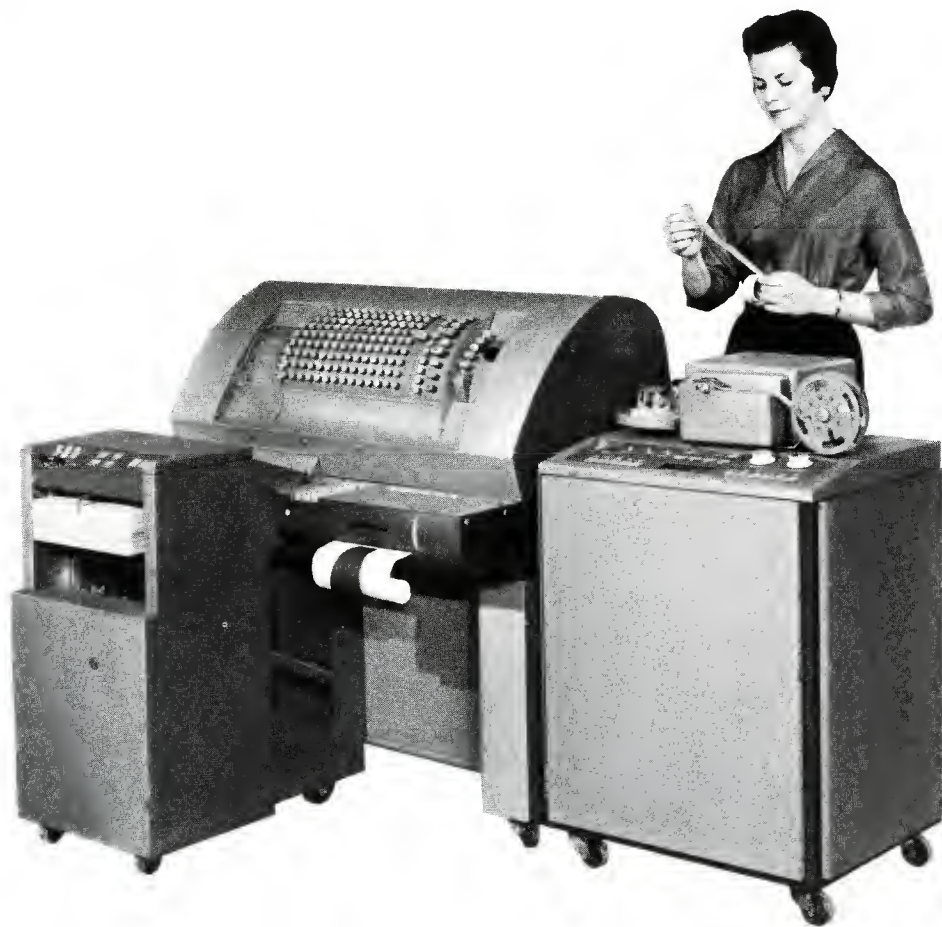
On-Line Processing — Under control of the NCR 310 and 315 computers, documents can be read, edited, sorted, and processed on a digital or full-field basis, and listed on high-speed printers as specified by the system requirements.

In volume applications, magnetic sorter-readers can be multiplexed on-line with the NCR 315 processor.

While the Pitney-Bowes NCR Magnetic Sorter-Reader was designed to automate banking procedures, it will simplify paper-handling in industry, utilities, and government where volume document processing includes sorting, listing, and posting.



NCR Fully Automated Post-Tronic Machine



The NCR POST-TRONIC* Machine electronically controls one-run posting of checking accounts in banks. Its many exclusive features combine conventional records with practical and economical automation.

For full automation, the Automatic Ledger Feeder and Tape Reader with Electronic Controller are combined with the Post-Tronic Machine. This fully automated machine is controlled by the introduction of a sequenced punched paper tape through the Electronic Controller.

The punched paper tape posting medium can be created by: (1) An NCR adding machine coupled with an account number

checking device and tape recorder, or (2) NCR computer system.

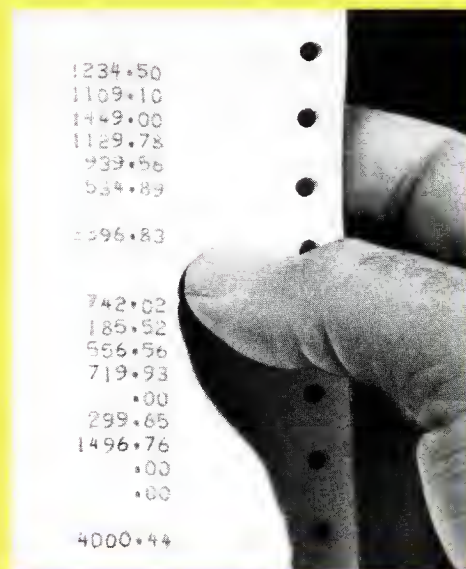
Several automated Post-Tronic Machines can be easily monitored by one operator. Visual control lights indicate the exact status of each machine. When a unit is not operating, the monitor-operator can quickly determine the reason . . . make the necessary correction . . . and immediately place the unit back in operation.

The automated Post-Tronic can be the perfect answer to the simplification of posting share and loan accounts in credit unions and other financial institutions.

Section 4

NCR

COMPUTERS



The NCR 390 is the only computer in its field that accepts historical records in the form of visible ledger cards... then automatically updates and "writes" the information in a form that can be read by both the NCR 390 and your personnel.

The moderately-priced 390 simplifies accounting procedures in many areas: (1) Digests thousands and thousands of details and converts the results into meaningful management reports. (2) Specializes in exception reporting to "free" key personnel from examining great masses of detail, and (3) automates accounting procedures with unlimited magnetic-tape ledger cards for instant and visual checking of a specific fact.

FIVE METHODS OF INPUT:

Punched paper tape, punched cards, magnetic-tape ledger records, optical reading of NCR journal tape, and computer console.

CENTRAL PROCESSOR:

The solid-state processor, containing 2400 characters of magnetic core memory, is simple and easy to program. This is achieved through a powerful, four-address, command structure that reduces length of programs and conserves memory space.

FOUR METHODS OF OUTPUT:

Paper tape, punched cards, magnetic-tape ledger cards, and multi-purpose printer.

Regardless of the size of business—or kind of business—the NCR 390 is worthy of investigation. It is a low-cost business computer that saves time and money in the processing of paperwork.

NCR 390 Computer





The NCR 310—a low-cost computer—contains capabilities and speeds that far excel computers many times its price and size. Its high-speed paper tape input (1,000 characters a second) . . . high-speed processing (in millionths of a second) . . . and high-speed output (numeric listing—1,800 lines per minute, or alpha-numeric printing—670 lines per minute) provide economical processing of high-volume paperwork inherent in banking and retail merchandise reporting.

FOR BANKS

The NCR 310, programmed for MICR, utilizes the full capabilities of the magnetic Sorter-Reader and high-speed Lister-Printer for on-line transit sorting and listing . . . or off-line posting of demand deposit accounts by automated Post-Tronic machines.

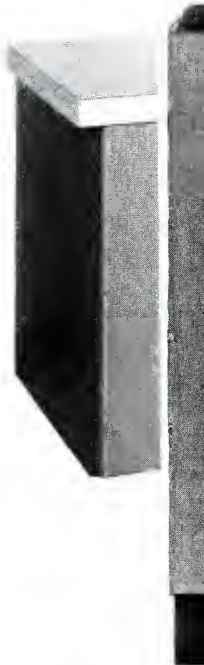
FOR RETAILERS

The NCR 310 summarizes, in one minute, thousands of random transactions into meaningful reports: sales by departments, classifications within departments, price-line reports, and unit sales analysis by vendor, style, size, color, season, and price.

CUSTOMER PROGRAMS

NCR's Complete Installation Service includes "A Library of Packaged Programs." This assures the user of a smooth and economical transition to computer processing.

NCR 310 Computer







NCR 315 Computer



Economical and Expansible

The NCR 315 Computer is a compact, modular electronic data processing system . . . it can be installed as a small scale system and built up to one with large scale capabilities. The many features built into the 315 make it the most versatile and economical system available today. And, it has the speed and power to efficiently handle engineering and scientific problems. Dollar for dollar, the 315 processes more data than any other computer in its price range.

A Unique Magnetic File System

The NCR 315 features a unique magnetic file system called CRAM . . . Card Random Access Memory. Cram provides the 315 with the ability to perform sequential processing . . . random processing . . . real-time processing . . . or a combination of these methods. With a 315 CRAM System, data stored in CRAM files can be interrogated even from hundreds of miles away through the use of Remote Inquiry Stations. The flexibility offered by CRAM opens up a whole new systems approach to electronic data processing.

A Completely Balanced System

The NCR 315 Computer has been designed to coordinate the operation of a large number of peripheral units. Input, processing, and output balance is achieved through the Demand Interrupt feature built into the System. Most of the Input-Output units have the ability to interrupt the Central Processor as they require attention . . . be reactivated and then continue operating independently as the processor returns to its main operating routine.

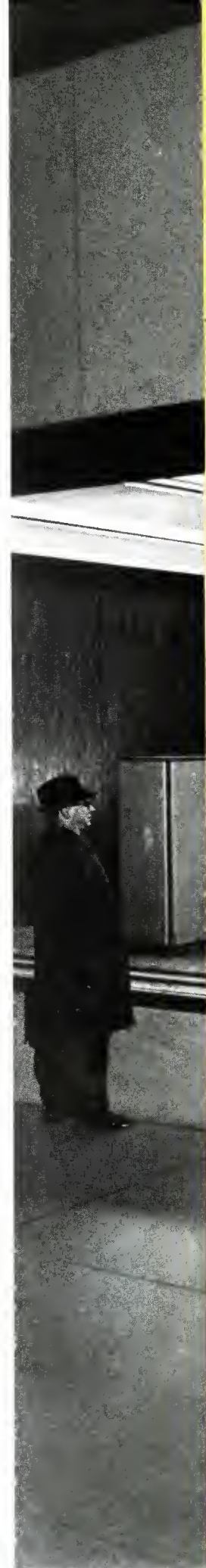
The NCR 315 is worthy of investigation. You will be impressed with its Price-Performance Ratio — the measure of computer evaluation.

NCR Data Processing Centers

NCR Data Processing Centers are strategically located throughout the United States. These Centers offer to management the opportunity of obtaining detailed reports inter-relating department activities.

The reports are created from punched paper tape . . . punched cards . . . optical reading of journal tapes. All the necessary data required by the center is prepared as an automatic by-product of a machine operation within a department.

It is by utilizing NCR's Data Processing Centers that hundreds of businessmen throughout the country are achieving a total systems picture to obtain up-to-the-minute facts.



NCR DATA P





At Your Service . . .

A Highly Trained Team of NCR Specialists

Systems Specialists

serve the data processing needs of financial institutions, insurance companies, utilities, state and local governments, industry, hospitals, wholesalers, and retailers from a *Total Systems Concept*. Each specialist has broad systems experience and educational background in his specific field. Each collects, expands, and disseminates the latest techniques for improved systems and procedures...providing the NCR customer with the best results from his computer installation.

Site Planning Representatives

are responsible for controlling the physical environment for NCR computers. Each is thoroughly conversant with the latest developments in temperature, humidity, architecture, air conditioning, and power requirements. Each is qualified to assure maximum efficiency in traffic flow, space requirements, and equipment monitoring . . . providing an efficient "home" for your investment.

Programming Instructors

are especially trained in techniques of clear, simple communication for teaching adult groups with varying degrees of technical background. In addition to teaching basic programming, they conduct management-type seminars designed for all levels of management . . . refresher and "post-graduate" courses for operators and programmers . . . and courses in the use of NCR's standard program routines, such as COBOL, NEAT, STEP, and PACE.

Installation Representatives

coordinate planning, training, programming, and procedures to assure a smooth installation. Each is a specialist, with broad experience and educational background in the field of EDP. Each is qualified to serve as a systems consultant . . . to confer and work with all levels of management . . . to help you obtain the maximum utilization of equipment and personnel.

Your NCR Representative . . .

a highly trained consultant with a working knowledge based on NCR's 78 years of systems experience. He specializes in studying the latest techniques in data processing—starting with the original entry . . . right through to the final printed report.

A study of your procedures could reveal how you, too, can obtain impressive savings . . . how work duplication can be eliminated . . . how paper-handling costs can be reduced . . . how up-to-the-minute facts can be obtained for management.

To learn how NCR Data Processing Systems save money, call your local NCR Representative today.

NCR PROVIDES TOTAL SYSTEMS — FROM ORIGINAL ENTRY TO FINAL REPORT —
THROUGH ACCOUNTING MACHINES, CASH REGISTERS OR ADDING MACHINES, AND DATA PROCESSING
The National Cash Register Co. • 1,133 offices in 151 countries • 79 years of helping business save money



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